

REMARKS/ARGUMENTS

The present application is a continuation, not a continuation-in-part, of U.S. Patent Application 09/295,858 as indicated in Applicants' amendment filed April 29, 2002. Examiner previously acknowledged in an Office Action mailed May 22, 2003 receipt of Applicants' papers claiming priority from U.S. Patent Application 09/295,858. Correction is respectfully requested.

Status of the Application

Claims 1-22 were pending. Claims 1, 9, and 20-22 have been amended. Claim 23 has been added. Support for the amended and new claims can be found in the specification. No new matter has been added.

Claims 1-2 and 5-22 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 5,869,387 to Sato et al. ("Sato").

Claims 3-4 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Sato and Wolf, Silicon Processing for the VLSI Era, Vol. 1, p. 57-58 ("Wolf").

The Claims

Applicants respectfully submit that the features of the present invention recited in claim 1, are not made obvious by Sato. For example, Sato does not discuss at least that "... deposition of a deposition material and an etching species for etching an etchable material during a portion of time that the non-uniform surface is subjected to the etching," This is not disputed by the Examiner:

However, Examiner states that "the performance of two steps simultaneously (i.e. applying a deposition species and an etching species) which have previously been performed in sequence (separately applying deposition species and etching species) was held to have been obvious." Applicants believe that Examiner's position overlooks other claimed features, such as "... the combination of the deposition species and the etching species contacting the non-uniform surface in a thermal setting" In Sato, etching does not occurs simultaneously with a heat

treatment, and thus occurs in a different thermal setting than deposition. For example, Sato discusses "etching with dilute hydrofluoric acid prior to the heat treatment." (Sato: col. 8, lines 51-51). Elsewhere, Sato shows etching (Figs. 2D, 4D) after a heat treatment (Figs. 2B, 4B).

For at least this reason, claims 1 should be allowed. Independent claims 20 and 22 should also be allowed for at least a similar rationale.

Dependent claims 2 and 3-23 should be allowed for at least a similar rationale as discussed for the independent claims, as well as the additional limitations they recite.

In addition, the above deficiency of Sato is further exposed with respect to Applicants' claims 2, 21, and 22. Taking claim 2 as a representative example, claim 2 recites, in part, "said thermal setting increases a temperature of said non-uniform surface to about 1,000 Degrees Celsius and greater." Nowhere does Sato teach etching in such a thermal setting. Sato is silent about the claimed thermal setting during etching and clearly lacks such feature in the manner claimed. The passages cited by Examiner simply describes an environment for heat treatment, which is irrelevant. Sato's heat treatment occurs at a different time than etching. Claims 2, 21, and 22 should be allowed for at least this reason.

With respect to new claim 23, Applicants further submit that cited references do not discuss or suggest using a gaseous HCl etchant. Support for this feature can be found in Applicants' specification at least on page 3, lines 31-32 and page 21, lines 28-29. Sato discusses using an aqueous NaOH or other etching solutions. (Sato: col. 10, line 54 - col. 11, lines 30). Sato's substrates are immersed (i.e., dipped into a fluid). (See Sato: col. 17, 26-29; col. 20, lines 17-19; col. 21, lines 3-6; col. 21, lines 48-50; col. 22, lines 26-29; col. 23, lines 15-24). Sato's solutions or aqueous NaOH is clearly not gaseous HCl. In fact, nowhere does Sato even discuss HCl, much less a gaseous HCl. For at least this reason, claim 23 should be allowed.

Appl. No. 09/710,628

PATENT

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Reply to Final Office Action mailed February 24, 2004

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance and an action to that end is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 650-326-2400.

Respectfully submitted,



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